



west virginia department of environmental protection

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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: G40-C086
Plant ID No.: 777-00142
Applicant: Hawkeye Contracting Company, LLC
Facility Name: Guyan Surface Mine; Huff Creek Surface Mine; Panther Creek Surface Mine
Location(s): Amherstdale, Logan County; Wharton, Boone County; Eskdale, Kanawha County
SIC Code: 1221 (Bituminous Coal and Lignite-Surface Mining)
Application Type: Construction
Received Date: January 20, 2017
Engineer Assigned: Thornton E. Martin Jr.
Fee Amount: \$1,500
Date Received: January 20, 2017
Complete Date: April 10, 2017
Applicant Ad Date: January 27, 2017; February 01, 2017; March 10, 2017
Newspaper: *Logan Banner; Coal Valley News; Charleston Gazette Mail*
UTM's: Site 1 - Easting: 427.25499 km Northing: 4182.52098 km Zone: 17
Site 2 - Easting: 446.45039 km Northing: 4184.29172 km Zone: 17
Site 3 - Easting: 457.54025 km Northing: 4212.51308 km Zone: 17
Description: Applicant proposes to construct and operate a portable crushing/screening plant for three separate locations in three separate Counties.

PROCESS DESCRIPTION

Rock from adjacent overburden areas will be transferred to BS-01 (PW) by front end loader @ TP-01 (UD-PW); go to belt conveyor BC-01 (N) @ TP-02 (TC-PE); and transfer to screen SS-01 (PW) @ TP-03 (TC-PW). The screen will discharge material by size to two separate stockpiles OS-01 (SW-WS) and OS-02 (SW-WS) via belt conveyors BC-02 (N) and BC-03 (N) @ TP-04 (TC-FE) thru TP-08 (TC-MDH). The screen will transfer to belt conveyor BC-04 (N) @ TP-10 (TC-FE) and feed bin BS-02 (PW) @ TP-11 (TC-PW). From BS-02, material will transfer to BC-05 (N) @ TP-12 (TC-PE) to the crusher CR-01 (FE) @ TP-13 (TC-FE). The material will be crushed and discharged to stockpiles OS-03 (SW-WS), OS-04 (SW-WS) and OS-05 (SW-WS) according to size via belt conveyors BC-06 (N), BC-07 (N) and BC-08 (N) @ TP-14 (TC-FE) thru TP-21 (LO-MDH). Material will be loaded to truck for distribution on mine site at TP-06 (LO-MDH), TP-09 (LO-MDH), TP-16 (LO-MDH) and TP-22 (LO-

MDH).

Company officials have agreed to install a portable water spray system to control fugitive emissions as required by the General Permit Program.

The facility shall be constructed and operated in accordance with the following equipment and control device information taken from registration application G40-C086:

Table 1: Equipment Summary

Equipment ID No.	Date of Manufacture	Description	Maximum Capacity		Control Equipment ¹
			TPH	TPY	
BS-01	2015	10 Ton Storage Bin - receives rock from overburden area via end loader	----	800,000	PW
BC-01	2015	Belt Conveyor - receives rock from bin BS-01 and transfers to screen SS-01	400	800,000	N
SS-01	2015	Double Deck Screen - receives rock from belt conveyor BC-01. Sized rock drops to Belt conveyors BC-02, BC-03 or BC-04	400	800,000	PW
BC-02	2015	Belt Conveyor - receives rock from screen SS-01 and transfers to open stockpile OS-01	400	800,000	N
OS-01	----	5,000 ton Open Stockpile - receives -1X0 rock from belt conveyor BC-02	----	800,000	SW-WS
BC-03	2015	Belt Conveyor - receives rock from screen SS-01 and transfers to open stockpile OS-02	400	800,000	N
OS-02	----	5,000 ton Open Stockpile - receives 2X0 rock from belt conveyor BC-03	----	800,000	SW-WS
BC-04	2015	Belt Conveyor - receives rock +3 from screen SS-01 and transfers to bin BS-02	400	800,000	N
BS-02	2015	Storage Bin - receives rock +3 from belt conveyor BC-04 and transfers to belt conveyor BC-05	----	800,000	PW
BC-05	2015	Belt Conveyor - receives rock +3 from bin BS-02 and transfers to crusher CR-01	400	800,000	N
CR-01	2015	Jaw Crusher - receives rock from BS-02, crushes material dropping onto three separate product conveyors BC-06, BC-07 and BC-08	400	800,000	FW
BC-06	2015	Belt Conveyor - receives rock -2X0 from crusher CR-01 and transfers to open stockpile OS-03	400	800,000	N
OS-03	----	5,000 ton Open Stockpile - receives -1X0 rock from belt conveyor BC-06	----	800,000	SW-WS
BC-07	2015	Belt Conveyor - receives rock from crusher CR-01 and transfers to open stockpile OS-04	400	800,000	N
OS-04	----	5,000 ton Open Stockpile - receives 2X0 rock from belt conveyor BC-07	----	800,000	SW-WS
BC-08	2015	Belt Conveyor - receives rock from crusher CR-01 and transfers to open stockpile OS-05	400	800,000	N
OS-05	----	5,000 ton Open Stockpile - receives 3X0 rock from belt conveyor BC-08	----	800,000	SW-WS
E-1	2015	Caterpillar C4.4, Tier 3 Certified	111 bhp/2,200 rpm		N
E-2	2015	Caterpillar C4.4, Tier 3 Certified	111 bhp/2,200 rpm		N
T-1	2017	Diesel Tank, 1,000 gallon volume	8,000 gal/yr		N

¹ PW - Partial Enclosure w/water spray; FW - Full Enclosure w/water spray; SW-WS - Water Sprays; N - None

DESCRIPTION OF FUGITIVE EMISSIONS

Potential sources of fugitive emissions for this facility include emissions, which are not captured by pollution control equipment and emissions from open stockpiles and vehicular traffic on unpaved haulroads and work areas. The haulroads and work areas will be controlled by water truck. The water truck will be operated three times daily and more as needed in dry periods.

An additive to prevent freezing will be utilized in the winter months when freezing conditions are present. New course gravel base material will be added to unpaved haulroads as needed.

SITE INSPECTION

Hawkeye Contracting Company, LLC has contracts with surface mine property owner Blackhawk Mining. The proposed sites are situated within the surface mine boundaries, therefore, a site inspection was not deemed necessary at this time in conjunction with this permitting action.

Directions: **Site 1** - Route 119S to Logan, intersect with Route 10 and proceed approximately 7 miles. Turn Left onto Rum Creek Road or Dehue Hollow Road, follow road to foot of Lowe's Mountain, turn right onto the property at posted signs. Guard will direct to surface mine area belonging to Guyandotte Mining.

Site 2 - From Charleston, follow Route 119S to Route 85 at Madison, follow Route 85 past Van toward Bald Knob, proceed approximately 6.5 miles, entrance to surface mine on right.

Site 3 - Follow I-77S to Sharon, take the Sharon exit, turn left onto Cabin Creek Road, proceed toward Eskdale, the guard shack is located approximately 2 miles - ask directions to surface mine area.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haul roads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on the Reference Document for General Permit G40-C. The estimated emission calculations were performed by the applicant's consultant using the General Permit G40-C Excel emission calculation spreadsheet.

The engine emissions included in the application are for one (1) Caterpillar C4.4 and were found to be overstated, as the calculations were based on AP-42 emission factors instead of Manufacturers Data or EPA's Certificate of Conformity. In this instance, both the jaw crusher and the screening unit will each utilize a 2015 Caterpillar C4.4. The writer was able to confirm the correct emissions for these two engines based on the Manufacturer's Data Sheet for the 2015 Caterpillar C4.4 from a previous Applicant.

The proposed construction and operation will result in the estimated potential to discharge controlled emissions of 72.25 TPY of PM (particulate matter) and 16.06 TPY of PM₁₀ (particulate matter less than 10 microns). As mentioned in the previous paragraphs, the engine emissions were overstated using AP-42 emissions factors. Estimated emissions based on the Manufacturer's Data Sheet for two 2015 Caterpillar C4.4 engines are 1.80 TPY of CO (Carbon Monoxide), 1.08 TPY of NO_x (Nitrogen Oxides), 0.36 TPY of VOC (Volatile Organic Compounds), 0.10 TPY of PM₁₀ and <0.01 TPY of Total HAP's combined. Refer to the following tables for a complete summary of the proposed facility's emissions:

Table 2: Emissions Summary (*less Engines*)

Emissions Summary - Hawkeye Contracting Company, LLC Logan County Plant	Controlled PM Emissions		Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.14	0.62	0.07	0.29
Unpaved Haulroad Emissions	69.01	69.01	14.52	14.52
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>69.15</i>	<i>69.63</i>	<i>14.58</i>	<i>14.81</i>
Point Source Emissions				
Equipment Emissions	2.58	2.58	1.23	1.23
Transfer Point Emissions	0.04	0.04	0.02	0.02
Point Source Emissions Total	<i>2.62</i>	<i>2.62</i>	<i>1.25</i>	<i>1.25</i>
FACILITY EMISSIONS TOTAL				
	71.77	72.25	15.83	16.06

Table 3: Engine Emissions (*operating 2,000 hours/year*)

Source	Pollutant	Maximum Hourly Emissions (lb/hr)	Maximum Annual Emissions (tons/yr)
E-1 & E-2	Carbon Monoxide	1.80	1.80
	Nitrogen Oxides	1.08	1.08
	Volatile Organic Compounds	0.36	0.36
	PM ₁₀	0.10	0.10
	Formaldehyde	0.001	0.001

REGULATORY APPLICABILITY

PSD has no applicability to the proposed facility. The proposed construction and operation of a portable crusher/screening plant is subject to the following state and federal rules:

45CSR7 *To Prevent and Control Particulate Matter Air Pollution From Manufacturing Processes and Associated Operations*

The facility is subject to the requirements of 45CSR7 because it meets the definition of “Manufacturing Process” found in subsection 45CSR7.2.20. The facility should be in compliance with Subsection 3.1 (no greater than 20% opacity), Subsection 3.7 (no visible emissions from any storage structure pursuant to subsection 5.1 which is required to have a full enclosure and be equipped with a control device), Subsection 4.1 (PM emissions shall not exceed those allowed under Table 45-7A), Subsection 5.1 (manufacturing process and storage structures must be equipped with a system to minimize emissions), Subsection 5.2 (minimize PM emissions from haulroads and plant premises) when the particulate matter control methods and devices proposed within application G40-C086 are in operation.

According to Table 45-7A, for a type ‘a’ source with a maximum process weight rate of 800,000 lb/hour, the maximum allowable emission rate is 50 lb/hour of particulate matter. The maximum emission rate is 2.62 lb/hour of particulate matter according to calculated emissions in fact sheet G40-C086.

45CSR13 Permits for Construction, Modification, Construction and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation

The proposed construction is subject to the requirements of 45CSR13 because it has the potential to discharge greater than 6 pph (pounds per hour) and 10 tpy (tons per year) of a regulated air pollutant based on 2,000 hours of operation. The applicant has applied for a G40-C registration to construct, submitted the proper \$1,500 application fee and published a Class I legal advertisement in the *Logan Banner*, *Coal Valley News*, and *Charleston Gazette Mail* on January 27, 2017, February 01, 2017, and March 10, 2017, respectively.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart OOO: Standards of Performance for Nonmetallic Mineral Processing Plants

The proposed construction is subject to 40 CFR 60 Subpart OOO because it will occur after April 22, 2008 and the plant processes more than 150 tons of rock per hour. The proposed construction will include one (1) screen, one (1) jaw crusher and five (5) belt conveyors, which are defined as affected facilities in 40 CFR 60 Subpart OOO. Therefore, the proposed construction is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart OOO - Standards of Performance for Nonmetallic Mineral Processing Plants. The facility should be in compliance with 60.672 (b) no greater than 7% opacity from any transfer point on belt conveyors or from any other affected facility (as defined in 60.670 and 60.671) and no greater than 12% opacity from any crusher when the particulate matter control methods and devices proposed within application G40-C086 are in operation.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, the portable crushing facility will be a non-major source which is subject to NSPS Subpart OOO. The facility’s potential to emit will be 1.25 TPY of a regulated air pollutant (PM₁₀), not including fugitive emissions, which is less than the 45CSR30 threshold of 100 TPY. Therefore, the facility will be subject to 45CSR30 and classified as a Title V deferred non-major source.

45CFR60 Subpart IIII—Standards of Performance for Stationary Compression Ignition Internal Combustion Engines

Hawkeye Contracting Company, LLC is subject to this subpart because the engines were manufactured after April 1, 2006. The engine emissions for E-1 and E-2 are EPA Tier 3 Certified.

40CFR63 Subpart ZZZZ—National Emission Standards for Hazardous Air Pollutants for Stationary Reciprocating Internal Combustion Engines

Hawkeye Contracting Company, LLC is subject to 40CFR63 Subpart ZZZZ, because E-1 and E-2 are considered a new area source of HAP's since they will be constructed on or after June 12, 2006, however, the only requirements that apply are those required under 45CFR60 Subpart IIII.

The proposed construction of Hawkeye Contracting Company, LLC's portable crushing/screening facility is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

The facility will have the potential to emit 2.62 TPY of a regulated air pollutant (PM), not including fugitive emissions, which is less than the 45CSR14 threshold of 250 TPY. This facility is not listed in Table 2, and so fugitive emissions are not included when determining source applicability. Therefore, the proposed construction is not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

Various VOC/non-criteria regulated pollutants are emitted from the incomplete combustion of diesel fuel. These emissions, however, are generally small and do not adversely impact the quality of the surrounding ambient air.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and location of this facility and the limit of the proposed construction. This facility will be located in Logan County, Boone County or Kanawha County, WV. Logan and Boone Counties are currently designated as in-attainment for PM_{2.5} (particulate matter less than 2.5 microns in diameter). Kanawha County, WV, is currently designated a PM_{2.5} nonattainment area (for both the annual and the 2006 24-hr standards), but is in attainment for all other regulated pollutants. This facility will be a minor source as defined by 45CSR14 and 45CSR19, therefore, an air quality impact analysis is not required.

GENERAL PERMIT ELIGIBILITY

The proposed construction of this facility meets the applicability criteria (Section 2.3), siting criteria (Section 3.1) and limitations and standards (Section 5.1) as specified in General Permit G40-C.

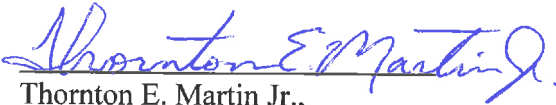
MONITORING OF OPERATIONS

G40-C registrants will be required to perform the following monitoring and recordkeeping:

1. Monitor and record daily and monthly records of the amount of nonmetallic minerals processed.
2. Monitor and record calendar monthly and calendar annual quantity of fuel consumed and hours of operation for all engines and combustion sources.
3. Monitor and record calendar annual quantity of organic liquid throughput in all registered storage tanks.
4. Conduct visual observations of all points listed in the registration that are subject to opacity limits.
5. Conduct annual preventative maintenance/inspection, and all routine maintenance service and repairs as required, to facilitate proper control device performance, for the control devices listed in the registration.
6. Perform are applicable required monitoring, recordkeeping, reporting and testing that is required under 40CFR60 Subparts OOO, IIII, and JJJJ.
7. These records shall be maintained on-site for a minimum of five (5) years from the date of record creation and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

RECOMMENDATION TO DIRECTOR

The information contained in this construction application indicates that compliance with all applicable regulations should be achieved when all proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. No public comments were received. Therefore, the granting of a G40-C registration to Hawkeye Contracting Company, LLC for the construction and operation of a portable crusher and screening facility located at one of three locations, in Logan, Boone and Kanawha Counties, WV is hereby recommended.


Thornton E. Martin Jr.,
Permit Engineer

April 10, 2017

Date